

HEERWAGEN

ACOUSTIC DIAPHRAGM TILE

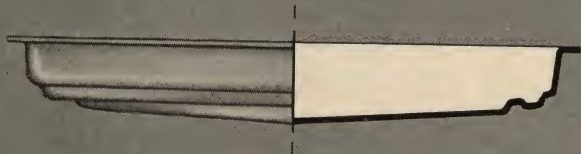
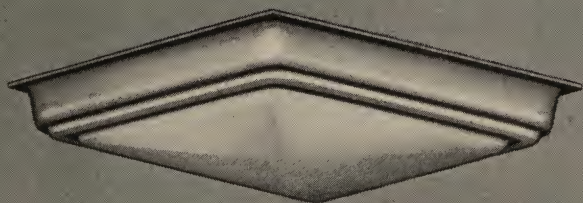
absorption
by diaphragmatic action

diffusion
by non-symmetrical
movements of diaphragm

liveliness
by combination of both
plus damped air space

HEERWAGEN ACOUSTIC DIAPHRAGM TILE

... absorbs sound by resonant vibration of surface



description

Heerwagen Acoustic Diaphragm Tile is featherweight, a square foot, which is the size of the tile, weighs only 3 oz. The color is the blended Caen Stone and the tile is fireproof as tested by the Columbia University. This acoustical tile is based on the diaphragmatic principle of sound control and each tile is a synthetic ear.

features

High Absorption — Low Frequencies — At 128 frequency Heerwagen Acoustic Diaphragm Tile have a coefficient of .62. At 256 frequency the coefficient is .75. Check these coefficients at these important low frequencies with other acoustical materials.

Diffusion — Due to non-symmetrical movements of the diaphragm of Heerwagen Acoustic Diaphragm Tile sound waves are minutely diffused. Diffusion of sound is just as important as absorption in sound control.

Diaphragmatic — Heerwagen Acoustic Diaphragm Tile absorbs sound by resonant vibration of their diaphragmatic surfaces. The high frequencies are scattered and diffused by the type of surface while the lower frequencies are variably dispersed because of the unequal resonant absorption peaks at several frequency intervals.

Trapped — Air Space — Air is the finest purifier of sound. Behind each Heerwagen Acoustic Diaphragm Tile is slightly more than one tenth of a cubic foot of trapped or damped air.

Liveliness — Heerwagen Acoustic Diaphragm Tile do not deaden an interior but create just the opposite — an alive natural tone interior both for music and speech. Neither will there be any fluttering at high frequencies with this tile.

Decorative — Heerwagen Acoustic Diaphragm Tile are a much appreciated relief from the institutional look of other acoustic materials. They add quite a distinctive decorative touch. The color of Heerwagen Acoustic Diaphragm Tile is a Caen Stone color and harmonizes with any color design. However this tile can be tinted any desired color.

Low Maintenance — Heerwagen Acoustic Diaphragm Tile have a low maintenance cost. Can be easily cleaned, we recommend using a vacuum cleaner. In the course of time can be refinished with our special Acoustical Paint which will not impair the acoustical properties. Most acoustical tile are markedly damaged acoustically by improper painting.

Psychological Effects — Ease of listening as well as ease of talking created by Heerwagen Acoustic Diaphragm Tile—not deadening lifeless interiors—produce highly desired psychological reactions.

applications

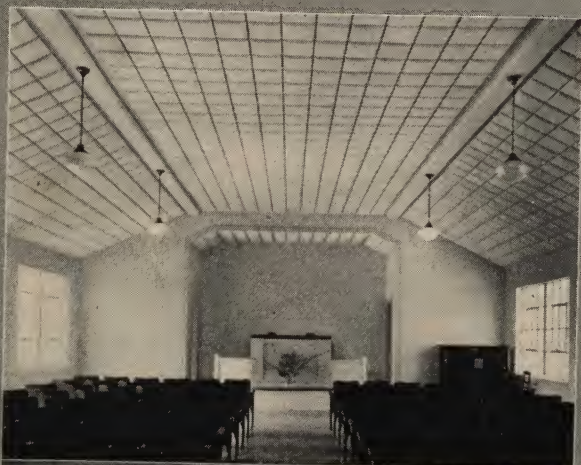
Any flat surface, such as plaster, plaster board, wall board, wood or concrete afford a good base for the application of Heerwagen Acoustic Diaphragm Tile.

It is necessary to have solid surface for this diaphragmatic tile due to trapped air space behind each tile.

Installation is made with our special adhesive — no tacks, staples or patented fasteners required.

Adaptable to all climatic conditions of humidity, dryness, heat and cold.

You can not over-correct with Heerwagen Acoustic Diaphragm Tile, nor will there be any dead areas or fluttering in the extreme high frequencies.



tests and practice

Dr. Paul E. Sabine, Riverbank Laboratories, made the absorption tests illustrated in the graph below. Note the high absorptive coefficient at 128 and 256 frequencies — compare these tests with all other acoustical materials.

Dr. L. B. Ham, Volume II of Journal of the Acoustical Society of America, January, 1940, sets out the non-symmetrical movements of the diaphragm surface of Heerwagen Acoustic Diaphragm Tile. These non-symmetrical movements give this tile outstanding diffusion qualities.

Bell Telephone Laboratories tests show that Heerwagen Acoustic Diaphragm Tile have variable coefficients depending on the sound. This adaptability of variable reverberation time to either the speaking voice or music creates the ideal acoustical effect in interiors.

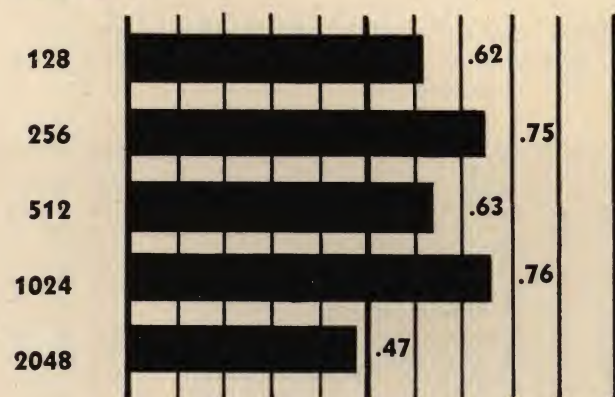
Electrical Testing Laboratories tests show that Heerwagen Acoustic Diaphragm Tile have a high light reflection factor, 0.715.

Columbia University tests show under duration of flame seconds, none, and glow seconds, none.

University of Arkansas tests show that Heerwagen Acoustic Diaphragm Tile have some insulation qualities, adding 16.3 to insulation of an interior.

Speakers, performers and musicians all comment on the ease and naturalness of speaking and singing in interiors treated with Heerwagen Acoustic Diaphragm Tile.

frequencies



absorption coefficients

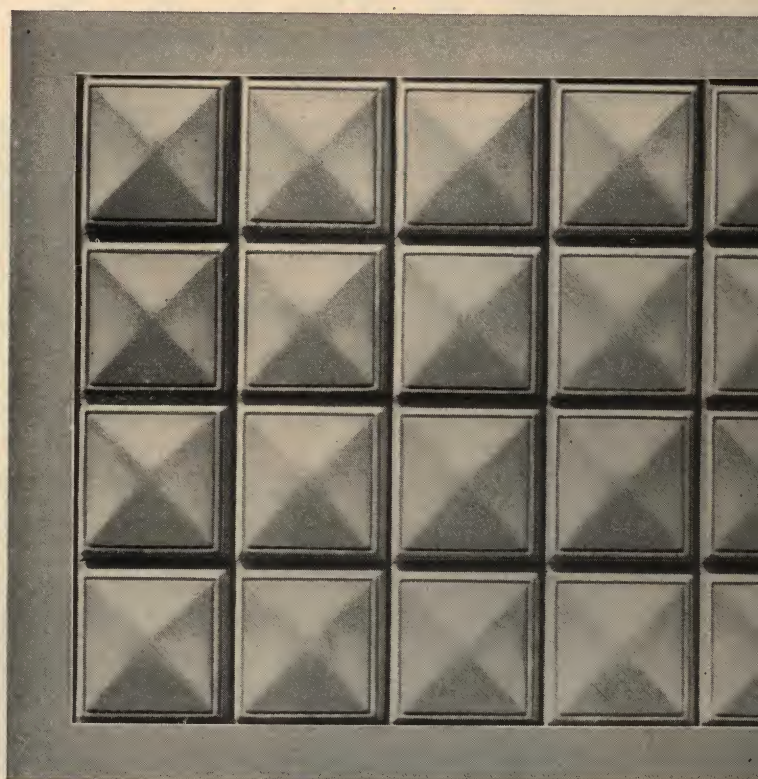
simplicity of application

Any flat surface, such as plaster, plaster board, wall board, wood or concrete afford an acceptable base for the installation of Heerwagen Acoustic Diaphragm Tile.

1. Ceiling and walls are first lined off in 12" squares.
2. Adhesive placed on underside of flange of tile using the installation frame to hold tile while adhesive is being applied. Then frame and tile are pressed against ceiling or walls, frame is removed leaving tile in place.
3. Joints and cracks are sealed and covered up with pointing-up compound by applying with small brush.

specifications

Heerwagen Acoustic Diaphragm Tile to be installed in accordance with manufacturer's directions. Use sufficient adhesive; should any ooze out at edges and appear unsightly, the pointing-up compound will cover up the adhesive. The pointing-up compound dries out the same color as tile — Caen Stone. Drop down $\frac{3}{4}$ " on wall to start first row of tile to allow joint with adjoining ceiling tile. Heerwagen Acoustic Diaphragm Tile come finished and do not require painting when installed.



Ideal

for broadcast studio sound control

Broadcasting stations appreciate the clarity and high fidelity produced in studios with Heerwagen Acoustic Tile. Regardless of the music group, there is no feed back from the low frequencies, nor fluttering from the extreme high frequencies.

Heerwagen Acoustic Diaphragm Tile does for the radio studio and control room just what the diaphragm does for the loud speaker.

One chief engineer wrote,

"Many musicians and other artists have made it a point to tell us how well they like to perform in these studios."



installations in broadcast studios from coast to coast

Arkansas KARK KELD KFFA KFSA KGRH KRKN KUOA KXAR	Colorado KRDO	Louisiana KCIL KROF WJBO	Montana KGEZ KOJM	Oklahoma KBYE KTUL	Texas (Cont.) KFJZ KHUX KMAC KMHT KNOW KONO KPET KRIG KRRV KTEM KWBU WRR
California KGER	Florida WEAR	Michigan WLDL	New York WJTN	Oregon KUIN	Pennsylvania WIP
Canada CHNS CKCL	Illinois WCFL WJBC	Mississippi WLOX	North Carolina WBBB WMLS	Tennessee WHBQ WMAK	Texas KCNC KCTX
	Iowa KSTT WMT	Missouri KCMO KDMO WMBH	North Dakota KFGO WDAY		Wisconsin WCLO WKOW
	Kansas KVGB		Ohio WLW		

engineering service and information

We are gladly at your service with your acoustical problems. Our acoustical physicist, designers and acoustical consultants will be only too glad to work with you, for in the main our interest is that your installation of Heerwagen Acoustic Diaphragm Tile be perfection.

HEERWAGEN

ACOUSTIC DECORATION COMPANY

Factory:
Fayetteville, Arkansas

Offices:
Los Angeles, California
Memphis, Tennessee

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